

Faculty Development in Radiochemistry at the University of Iowa

Executive Summary:

A faculty development program is proposed to enhance the academic programs of two beginning assistant professors in radiochemistry: Professor Tori Forbes in the Department of Chemistry and Professor Michael Schultz in the Department of Radiology. Professor Forbes has a strong background in actinide chemistry and proposes to develop a research program centered on understanding the transport mechanism for actinides (^{232}Th , ^{238}U , ^{237}Np , and ^{239}Pu) in groundwater systems. Another facet of her research is the actinide chemistry associated with aluminum oxide complexation as it complicates separations and vitrification of waste stored at the Hanford Site in Washington State. Professor Schultz has a broad background in radiochemistry stemming from his graduate research and his subsequent employment at the National Institute of Standards and Technology and Ametek Inc., ORTEC™, Oak Ridge, TN, where he initiated research on targeted radionuclide therapy using beta- and alpha-emitting radionuclides and worked with radiation detector, electronics, and software systems, respectively. At the University of Iowa, Professor Schultz's research focuses on developing innovative radiolabeled molecules designed for diagnostic imaging and therapeutic purposes. The proposed faculty development program includes providing funding to support their research efforts as well as providing a nurturing academic environment under which their individual research programs can flourish. An important element of this enhanced environment is the creation of a radiochemistry track to the BA degree in chemistry, which will provide the means to enhance the teaching, research and service components of their academic records.

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